November 2009 Newsletter:

PROACT INC. A PHARMACY BENEFITS MANAGEMENT COMPANY

Understanding Asthma

Inside this issue:

Asthma is a respiratory disorder characterized by chronic inflammation of the lungs. This inflammation leads to constriction of the bronchi through which air is moved, leading to an increased difficulty in breathing.

Symptoms of Asthma

While symptoms will vary from patient to patient, traditionally those with asthma present with a variety of symptoms, including, cough, wheezing, shortness of breath, chest tightness, and sputum production. Asthmatics always have some underlying, chronic inflammation of the bronchi, however some with asthma may not experience daily symptoms. Acute episodes known as "Asthma Attacks" are periods of intense bronco-constriction leading to much more severe symptoms.

Factors Worsening Asthma

Many diseases states, conditions, or drug therapies can increase the severity of asthma symptoms. While these are not a concern for all asthmatics, they are important factors for consideration.

Chronic conditions which lead to airway constriction such as allergic rhinitis, sinusitis or GERD are treatable disease states that will help reduce the severity of asthma symptoms if well controlled.

Control these to reduce asthma severity

- Allergic Rhinitis (nasal corticosteroids often most effective)
- Sinusitis (bacterial forms warrant antibiotic therapy)
- Gastro-esophageal reflux (treat GERD, avoid food at bedtime, elevate head at bed)
- Influenza vaccine annually

Some medications such as NSAIDs for pain and beta blockers for hypertension can also lead to bronco-constriction. While this is not to say that these agents cannot be used in asthmatics, rather, it is important that these agents should be used with caution.

Cold weather can also lead to constriction of the bronchi. While it is not always possible (although favorable) to avoid the cold, it is important for asthmatics to be aware that they may require rescue therapy more frequently in the winter months.

Respiratory infections including influenza are especially dangerous for those with respiratory disorders such as asthma. It is important that those with asthma, or any respiratory disorder take common sense precautions to help reduce the risk of catching the cold or influenza, including annual flu vaccinations.

Diagnosis

Diagnosis of asthma is often determined through spirometry. Spirometry is a test to determine the amount as well as the speed at which air is exhaled. Patients inhale deeply, and then forcefully exhale through a small device known as a spirometer. This reading is often used to gauge the severity of the disease.

	Days w/ Symptoms	Nights w/ Symptoms	PEF or FEV_1 (spirometry)
Step 4: Severe	Continuous	Frequent	≤60%
Step 3: Moderate	Daily	≥5 / month	>60% - <80%
Step 2: Mild	3-6 / week	3-4 / month	≥80%
Step 1: Mild-rare	≤2/week	≤2/month	≥80%

Monitoring of Asthma

Spirometry is used not only for diagnosis, but for the monitoring of disease as well. It is recommended that after diagnosis, spirometry is performed once treatment has stabilized symptoms, and then annually to track disease progression as well as efficacy of therapy.

Goals of Asthma Therapy

- Prevent, or lessen severity and frequency of acute attacks
- Maintain pulmonary function as close to normal as possible
- Improve quality of life, maintain normal lifestyle

Indicators of Poor Control

Properly treated, asthma is a condition that you can live with, with few complications. If you find that you have symptoms causing you to wake in the night, visit the ER, or increase use of your rapid acting inhaler, it is time to talk to your doctor about your therapy.

Treatment

Treatment of asthma should focus around avoidance of respiratory irritants and the use of pharmacologic therapy when necessary

Avoidance of Irritants

There has been a strong association between those who are sensitized to airborne allergies and those with asthma. Therefore, limiting exposure to these irritants is an effective form of reducing acute asthma attacks.

While some irritants may impact some more than others, causal relationships have been associated with exposure to dust mites, cat dander, and tobacco smoke. Avoiding these irritants will reduce the frequency and severity of attacks.

Pharmacologic Therapy

Drug therapy of asthma is centered around two main categories of therapy: those for quick relief of acute attacks, and those for long term control of symptoms.

Short acting beta-agonists such as albuterol inhalers or solution for nebulization are often first line therapy for treatment of acute attacks. These agents work to quickly open the bronchi to increase respiratory volume. It is important to remember that these agents are for acute attacks and are not generally recommended for regularly scheduled use.

For more severe cases of acute asthma attacks that require ER admission, systemic (IV) corticosteroids may be used to rapidly reverse airway inflammation.

Preventative therapy includes a variety of treatment options. They include: corticosteroids (inhaled or oral), Long-acting beta-agonists, mast cell stabilizers, leukotriene inhibitors, and methylxanthines. These agents have been shown to reduce symptoms, the frequency and severity of exacerbations, the need for fast acting inhalers, as well as to helping to improve lung function.

Inhaled corticosteroids such as Aerobid, Azmacort, Flovent, Pulmicort and QVAR are often considered first line therapy for routine use as they have been found to be the most effective in long term treatment of persistent asthma. While "steroids" are often looked at in an unfavorable light, these agents are very effective and there is little risks for adverse events when used at recommended dosages.

You can reduce the potential for adverse events by:

- Using a spacer (aerosolized) and rinsing mouth after use
- Using lowest possible dose
- Use in combination with a long acting beta-agonist

The addition of a long acting beta-agonist such as Foradil or Serevent is often necessary when an inhaled corticosteroid alone is insufficient. Long acting beta-agonists however, are not recommended for use alone, and should only be used as adjunctive therapy.

Due to the increased safety and efficacy of combination therapy with an inhaled corticosteroid and a long acting beta-agonist, some medications such as Advair and Symbicort now combine these two drug classes in one convenient dosage form.

Mast cell stabilizers such as Intal and Tilade work to reduce the release of histamine and other mediators that lead to inflammation in the respiratory track. While these medications are not overly efficacious, they are safe for use in pediatric patients greater than 5 years of age, and have minimal side effects.

Leukotriene Modifiers are a new class of medication that work to reduce bronco-constriction. These medications such as Accolate, Singular, or Zyflo, are not as effective as corticosteroid therapy, however, they have fewer side effects. Another advantage is that Singular is approved for use in children as young as 1 year old.

Methylxanthines are an older class of medication which includes drugs like theophylline. While effective, these agents have many side effects and drug interactions and must be closely monitored. These drugs should be reserved for those failing multiple other primary and secondary therapies.

CONTACT US: While it is important to keep open lines of communication with your physician and local pharmacist regarding your prescriptions, we understand that the amount of information received can sometimes be overwhelming.

We would like to remind you that our clinical department is here to help! We want to see our members taking the right medication at the right cost. While not all medications have a true generic, there are often therapeutic alternatives available that could provide the same benefit, while costing you less.

Please feel free to contact our clinical department at any time for questions regarding your prescriptions, or for cost saving alternatives.

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